

CLAIMS

What is claimed is:

1. A node system of a high-availability cluster, the node system comprising:  
5 a first register configured to store multi-state status data of the node; and  
an output port configured to send signals representing the multi-state  
status data of the node,  
wherein the multi-state status data of the node includes at least one  
degraded state.
- 10 2. The node system of claim 1, further comprising:  
an input port configured to receive signals representing multi-state status  
data of another node;  
a second register configured to store the multi-state status data from the  
15 other node,  
wherein the multi-state status data of the other node includes at least one  
degraded state.
3. The node system of claim 2, wherein the multi-state status data of the  
20 other node further includes a no signal state.
4. The node system of claim 1, wherein the multi-state status data of the  
node includes multiple levels of degradation.
- 25 5. The node system of claim 3, wherein the multi-state status data of the  
other node includes multiple levels of degradation.
6. The node system of claim 2, wherein the input and output ports each  
couple to a point-to-point communication path for communicating the  
30 status data between nodes of the cluster.

7. The node system of 1, further comprising a rule file and an operating system, wherein the operating system applies rules from the rule file to determine the multi-state status of the node.
- 5 8. The node system of claim 7, wherein the rules includes a rule such that receipt of a critical chassis code results in a bad state and another rule such that receipt of a chassis code below critical results in a degraded state.
- 10 9. A method of status reporting for a node of a cluster, the method comprising applying a set of rules to determine current multi-state status of the node, wherein states of the multi-state status includes a good state, a bad state, and at least one degraded state.
- 15 10. The method of claim 9, further comprising:  
writing the multi-state status of the node to a first register.
11. The method of claim 10, further comprising:  
driving the multi-state status from the first register to a next node via a  
20 point-to-point communications path.
12. The method of claim 11, further comprising:  
receiving multi-state status from another node; and  
writing the multi-state status from the other node to a second register.
- 25 13. The method of claim 12, further comprising:  
reading the statuses from the first and second registers; and  
taking action to maintain high availability of the cluster based on the  
statuses read.
- 30 14. The method of claim 11, wherein the status writable into the second register includes a no signal state.

15. The method of claim 9, wherein the multi-state status of the node includes multiple levels of degradation.
16. The method of claim 12, wherein the multi-state status from the other  
5 node includes multiple levels of degradation.
17. The method of claim 9, wherein the set of rules includes a rule such that receipt of a chassis code of a critical level results in the bad state and another rule such that receipt of a chassis code of a level below critical  
10 results in a degraded state.
18. An apparatus for reporting status from a node of a cluster, the apparatus comprising:  
a processor for executing instructions;  
15 memory for holding data;  
system interconnect to provide intercommunication between components of the apparatus;  
a software module that is configured to apply a set of rules to determine current multi-state status of the node; and  
20 signaling hardware configured to output the multi-state status of the node, wherein states of the multi-state status includes a good state, a bad state, and at least one degraded state.
19. The apparatus of claim 18, wherein the signaling hardware is further  
25 configured to receive as input the multi-state status from another node of the cluster.
20. The apparatus of claim 19, wherein the multi-state status includes multiple levels of degradation.
- 30